

## Precision Agriculture in the paddock – grower experience

**Lex Webb, 'Belvedere'**

**Baralaba, QLD**

**Farming area:** 900 hectares (ha) of cropping.

**Crops:** A standard rotation of sorghum and mungbeans in the summer and chickpeas and wheat in the winter given the opportunity to plant.



Figure 1: Lex Webb's John Deere R4023. Photo: Lex Webb

### What changes have been made?

Over the years, Lex has utilised a number of different trailing spray-rigs. A custom-made Silvan trailing spray-rig behind a John Deere Front Wheel Assist (FWA) tractor was Lex's last combination used. He has now upgraded to a John Deere R4023 self-propelled spray-rig.

Lex believed that they weren't reaching their spraying potential with the trailing rig and believed an upgrade would allow them to achieve this, whilst using the section control to help reduce chemical costs.

'With the size of our paddocks, there was no reason to purchase anything larger and the 24-metre boom fit in with our tramlines with only minor adjustments. We still have the trailing rig and hope to utilise it as a pasture sprayer to control parthenium,' Lex said.

Lex said that the hours were beginning to add up on the tractor pulling the trailing rig and the roughness of the black soil paddocks

were starting to leave their mark on the machine.

'We also decided to go self-propelled because of the comfort it could provide.'

'These were the main reasons for choosing this upgrade to help our business move forward,' he said.

### Benefits

The biggest benefit that they have found since investing is the area of spraying saved with section control.

Lex stated another benefit includes the ability to increase spraying speed and productivity.

'We would have easily increased productivity by 10% with the new machine,' Lex said.

'This increase has come about as an increase in acres per hour as we were restricted to the speed the tractor and trailing-rig could cover ground.'

'With the self-propelled we are able to spray at 22km/hr if the need arises but can just as easily travel 17km/hr doing a better job without the wear and tear on the machine.'

'The only thing that slows us down now is the paddock conditions, but we just slow down over the rougher parts without losing time or area covered overall.'

By using section control on the R4023, Lex has reduced their area sprayed by 3% immediately.

'This might not seem like a large reduction, but it means that we are also saving that amount in chemical costs. As a result our business is benefitting each year with lower chemical bills.'

Another aspect that has helped to increase productivity is the filtering system on the R4023.

'On our old rig we were getting 20 blocked nozzles a day. This meant we would have to stop and clean them out, that took time, but now we have had two or three blocked nozzles for the two years we have owned the machine. This is a testament to the filtering

system considering our water supply has not changed.'

Lex said they have not noticed a large difference in the levels of compaction in their paddocks by removing the weight of a tractor and trailing rig.

'This was an issue we thought about but were happy to find it was not going to have a major impact, he said.'

### Issues

Lex said the biggest issue has been with the GPS installed on the sprayer.

'We were using AgLeader for our RTK GPS and the sprayer came delivered with GreenStar from John Deere.'

'It took us some time to sort out a few teething problems, become used to a different system, and have to navigate a new screen. Other than that, there were no major issues with implementing the self-propelled into our system.'

'Moreover, we are quite happy with how, once we sorted the GPS, easy it was to make the transition to the self-propelled.'

### Future opportunities

Lex said that he would like to add the blue boom lights onto the sprayer.

He said, 'Having added visibility of the spray pattern at night would be very beneficial for noticing any blocked nozzles on the go.'

The ultimate goal for Lex would be to invest in a WeediT and the spot spraying technology.

'We had the opportunity to use one a few years ago. We sprayed 1500 acres and saved 90% of our chemical,' Lex said.

'As a result I think that it would be one piece of equipment that would quite easily pay for itself. Plus, the ability to spray a robust rate would be able to stem herbicide resistance in the region.'

### Recommendations

'Our biggest recommendation would be to consider which options are best to increase efficiency on your farm,' Lex said.

'If having a trailing rig and utilising the tractor for other work suits best then do that.'

'We have no regrets with the money we spent implementing the self-propelled into our system and would do it all over if given the opportunity,'



Figure 2: Lex's John Deere R4023. Photo: Lex Webb